3 METHODS

3.1 Excavation

A trench, measuring 18m by 18m (illus 1), was opened centred on the known location of the Roman road, where it would be crossed by the wind farm access road. The trench was excavated using a 13-tonne 360°, tracked, low ground pressure (LGP) mechanical excavator, equipped with a smooth-bladed ditching bucket. As the trench lay within the Scheduled Area, bog mats were used to create a temporary roadway into the trench and prevent the excavator disturbing unexcavated deposits within the Scheduled Area. Following removal of the upper layers of vegetation and peat, the surviving remains of the road were cleaned by hand and fully excavated. The locations of features and trenches were recorded using industry standard Total Station electronic surveying equipment.

3.2 Palaeoenvironmental sampling

The objectives of the palaeoenvironmental sampling strategy were to locate and recover organic material for subsequent laboratory analyses. They included species identification of the brushwood and larger wood used in the construction of the section of Roman road; identification of organic material that could be dated by radiocarbon assay; soil micromorphology of the stratified sediment in order to establish composition and form of deposition; and pollen analysis to produce a vegetational record of the study area before, during and after the Roman period. A topographical survey of the site and its environs was carried out to establish the position of a palaeochannel that had been crossed by the Roman road. Detailed method statements for analysis are presented with the environmental reports in Section 5.

3.2.1 Wood sampling

The large volume of brushwood used in the road foundations (see Section 5.1) was sampled by setting up a grid and sub-sampling each 1m × 1m square. This was carried out in two stages, each sampling stage effectively covering half the exposed area of road. Samples of wood were recovered by hand and stored in large, sealed sample buckets. Longer fragments exceeding the length of the buckets were laid flat within plastic guttering. All wood was contained within fresh water to maintain saturation. During the course of lifting the wood, a small quantity of plant material was found within the branches. This material was sampled and kept in a waterlogged state until placed in cold storage.

An assemblage of large-diameter trunkwood forming a lattice of lateral timbers and underlying cross-members was exposed on the south side of the trench at the base of the section. Some of the wood was very degraded and pulp-like. The better-preserved wood was sampled using a handsaw and each sub-sample was recorded in relation to a plan drawing of the lattice arrangement.

Material for radiocarbon dating was sub-sampled from the bulk samples back in the laboratory under clean conditions, thus lessening the potential for sample contamination.

3.2.2 Soil micromorphology sampling

Soil sampling tins were placed within discrete layers within the road section in order to establish their site formation dynamics and, importantly, to determine if the sediment had been brought in from elsewhere as construction material.

3.2.3 Pollen sampling

Immediately beneath the brushwood layer, a layer of peat was identified, reaching a depth of 1.11m. This provided a contiguous sample (Dun Law 113) using overlapping 0.5m monolith tins. The sequence was obtained to provide a record of the underlying peat that had formed within the base of a palaeochannel (see illus 1). A second 1.85m profile (Dun Law 3) was sampled using overlapping 0.5m monolith tins from a large machine-cut section exposed during the controlled removal of the peat within the access track.